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Paying When the Trains Run Late

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For a variety of reasons, local and central governments in New Zealand and elsewhere have a strong interest in encouraging citizens to make greater use of public transport. In Auckland and Wellington in particular, substantial central government subsidies are provided to local government in order to encourage greater use of trains. Importantly, a significant proportion of the large government capital investment in rail over the past few years has been made with the specific intention of increasing patronage on commuter rail services. Justifications include environmental benefits and reducing urban road congestion.

Whilst the availability of services at times and on routes convenient to travellers is fundamental to encouraging patronage, service quality is also very important in encouraging a modal shift from one transport form to another. Generally, rail passengers expect to travel in carriages that are comfortable, clean and, within reason, uncrowded. However for commuter services in particular, the most important quality dimension for most travellers is timeliness[1]. Commuters generally travel the same route at the same time on a daily basis in order to meet obligations that are themselves time-bound (e.g. employment conditions or appointments with professionals). Delays are costly – and not just to the passengers concerned. Costs can be measured in lost wages for the individual delayed, lost productivity for the employer or jilted professional service provider, and society in the more general context. For example, if commuters must leave home earlier in order to ensure arriving at work at the required time, they forfeit the benefits accruing from the activities that they can no longer undertake in that additional time period (e.g. sleeping a little later, reducing stress and therefore increasing both physical and mental health and wellbeing).

It is of no small economic concern, therefore, that media reports of non-trivial delays to scheduled commuter rail services in both Auckland[2] and Wellington[3] have become commonplace in recent times. Wellington Regional Council Chair Fran Wilde claims to be "fed up with the trains" towards which the Council contributes $22 million annually in subsidies[4].

[1] Freeman, R; and J Shaw. (2000) All Change: British Railway Privatisation, McGraw Hill. Also: http://www.gw.govt.nz/council-publications/pdfs/2006-7%20Annual%20Monitoring%20Report%20on%20the%20RLTS.pdf.
[2] e.g. http://www.nzherald.co.nz/rail/news/article.cfm?c_id=296&objectid=10536666
[3] e.g. http://www.stuff.co.nz/dominion-post/news/wellington/2702005/Forget-trains-try-carpooling
[4] http://wellington.scoop.co.nz/?p=9064

Clearly there are a variety of reasons why the trains could run late. Many of these are beyond the ability of the train operator to control – for example, a collision with a vehicle at a level crossing or a derailment following a landslide. Generally, however, these events occur only rarely. The more common reasons for delay are typically within the control of the operator – for example, poor maintenance leading to mechanical breakdown (trains), track and signalling failures (network infrastructure), or human factors such as train crews paying insufficient attention to scheduling requirements and maintenance crews mistakenly starting work on lines on the wrong day (as occurred in Wellington recently).

In normal commercial contracting, incentives for train operators can be aligned with the interests of commuters seeking timely train travel and society looking to maximise workforce productivity and general welfare by requiring the operator to pay a penalty when one of the 'controllable' factors leads to the train running late. In order to avoid paying penalties, the operator will take prudent steps to ensure that the delays do not occur (e.g. carrying out scheduled maintenance when indicated rather than deferring it in order to save money in the short term). However, the penalty must be sufficiently large and sheet home to the owners and managers of the firm in such a manner that those able to control the extent of delay directly bear the costs of their loss-causing actions. The penalty must also be structured so that it signals to the relevant decision-makers the relative costs of delays occurring at different times to different services. For example, the private and social costs of delaying a peak-hour train carrying several hundred passengers are much greater than the costs of delaying one running at the same time with only a handful of passengers on board. It should therefore be substantially more costly to the firm to cause a delay to a full train than an empty one. Only when the costs are well-targeted will the responsible individuals have sufficient cause to take all economically-reasonable precautions to avoid delays and select the appropriate remedial actions that will minimise the extent of losses when delays actually occur.

Such contracts do exist. For example, in the United Kingdom, the National Rail Conditions of Carriage[5] specify the minimum levels of compensation payable to all rail passengers whose journey is delayed beyond specified time thresholds. Train operators are free to (and in many cases do) offer even higher levels of compensation or set tighter thresholds at which compensation is triggered as a means of differentiating their services from competing services and transport mediums (especially on highly competitive routes). As compensation is paid per

[5] http://www.nationalrail.co.uk/system/galleries/download/misc/NRCOC.pdf

passenger and not per train, stronger signals are sent with respect to delays of high volume services relative to low volume ones. Furthermore, the firm must bear the not-insubstantial transaction costs of actually disbursing the payments. The transaction costs incurred often materially exceed the size of the actual compensation paid. Whilst the compensation paid does not fully cover the losses incurred by the passengers, it goes some way towards acknowledging and meaningfully apologising to the specific travellers personally inconvenienced by the delay. Moreover, rail operators face appropriate signals to ensure that their contracts with third parties (e.g. maintenance contractors) pass on to those parties the direct costs of controllable delays that their actions invoke.

These provisions have been credited with increased timeliness of British trains, leading to greater individual passenger confidence that the trains will on time, with a concomitant substantial increase in commuter train patronage (up to 48% in the decade following privatisation[6]), all other factors held constant. Not only do the trains now run (more or less) on time, but a substantial amount of the modal shift of commuter passengers from road to rail transport has occurred without any need to adjust subsidies to alter ticket prices paid by commuters.

What can we learn for New Zealand from this example? In Wellington, apparently, financial penalties for trains running late ***are*** in place. Yet the Regional Council Chair says, and the evidence of ongoing delays appears to confirm, they are neither severe enough nor structured appropriately to induce the due amount of attention to controllable factors to make a tangible difference in the incidence of delays. Whilst it has been claimed that the current operator cannot control the delays caused by mechanical or infrastructure failure attributed to poor attention to maintenance by previous owners[7], the same penalty clauses bound the previous owners. Clearly the penalties have failed to induce the appropriate amount of preventative work and their adequacy as an effective incentive mechanism remains a legitimate concern.

The exact nature of the penalties imposed is not known, but presumably the Regional Council withholds a proportion of the subsidy when trains run late. However, there are no legal obligations to compensate delayed passengers directly. Whilst voluntary penalties have been imposed by the operator, these have tended to be of the form of discounts offered to all

[6] Freeman, R; and J Shaw. (2000) All Change: British Railway Privatisation, McGraw Hill.
[7] The network infrastructure has been owned by the same organisation (ONTRACK) since 2004. Some of the rolling stock is, in fact, owned by the regional council itself. Ownership of the remaining rolling stock, stations and operations changed hands from Toll NZ to KiwiRail in 2008.

passengers on specific services at a future date, so are subject to exploitation by individuals who were not affected by the original delay, whilst failing to compensate those who were delayed but do not need to travel on the discounted services[8]. Furthermore, despite financially penalising the operator, these largely public relations-oriented initiatives fail to send signals to management of the relative costs of delays to different services in the manner of the British penalties.

Other problems with the provision of a free travel day as compensation are that the non-collection of fees actually reduces transaction costs for the operator, blunting the effectiveness of the penalty. (In contrast, in Britain compensation is payable directly to those commuters inconvenienced, increasing transaction costs for the operator.) On a free travel day, the staff normally involved in collection and monitoring that cannot be rostered off, are actually rewarded with a lower workload. Lastly the operator's loyal regular customers may receive no benefit at all as they are the ones who are most likely to have pre-purchased multi-day tickets.

It may be that the Wellington penalties are too small to make a difference to the operator's bottom line, and hence its managers and staff face few incentives to ensure the trains run on time. In that case, the Regional Council should increase them forthwith. However, the problem may go deeper than the magnitude of the penalty. Who owns and governs the firm may make a difference. Part of the problem underlying the inability of financial penalties to bring about timely train travel in Wellington at least is that the train operator is government-owned KiwiRail.

Penalties induce appropriate precautionary actions because the financial consequences are borne directly by the firm's owners. Owners bearing the risk of losses from controllable factors will share some of that risk (via their personally-appointed board directors) in the form of performance contracts with managers and staff. Hence the consequences are sheeted home as direct risks and thence costs to those individual employees whose actions ultimately cause the loss-making delays. If too many delays occur costing the shareholders too much as a consequence of the directors not sharing the risks with management and staff appropriately, the owners will replace the board with one that addresses the issue. Board members' positions are thus at risk if they neglect the costly effects of delays. But if the firm has no shareholder-owners who will personally bear the losses due to frequent (and/or large) penalties from running late, who will ultimately take responsibility for ensuring efficient allocation of the costs and risks of delay?

[8] Ironically, on one day recently when the operator offered free travel as a gesture to apologise for past inconveniences, train services were suspended for several hours due to contractor errors.

The typical solution of appointing a shareholding minister to oversee a government-owned entity is only a proxy for ownership – and potentially a very poor one – because it is not the minister's personal wealth at stake. No matter how large the financial penalties are for running late, the cost will ultimately be absorbed by the taxpayer rather than the minister (the 'soft budget constraint'). The minister may be easily persuaded to overlook large losses if it is politically expedient to do so, negating all of the incentive effects of penalty clauses in reducing the incidence of delays, thereby increasing the losses incurred by passengers and society.

The government has clearly signalled that it expects KiwiRail will continue to make operating losses in the foreseeable future. This action sends a signal to all stakeholders that the 'soft budget constraint' insures KiwiRail, its managers and staff from many commercial realities. It would be surprising if this did not dilute the propensity of staff and managers to proactively seek to reduce service delays.

Explicit subsidies for commuter rail also serve to limit the effectiveness of penalty clauses. The Regional Council subsidies combined with the 'soft budget constraint' may simply be fuelling a 'money-go-round' whereby the trains run late, subsidies are withheld, the rail operator makes a bigger loss, so either the taxpayer picks up the tab or the operator simply asks for a bigger subsidy (which is also funded from taxation) to operate the services the Regional Council wishes to provide. The operator's directors and managers have few reasons to design, impose, monitor and enforce penalty clauses on staff carrying out operational tasks – indeed, it may be in their personal interests (and those of the managers and staff in the Regional Council, who are also subject to a 'soft budget constraint') to perpetuate the subsidise-and-tax money-go-round (and making it as complicated as possible) to ensure their ongoing employment.

A side-effect of the subsidise-and-tax money-go-round is that the increased public transport and rail patronage objectives of the Regional Council may be subverted. If the rail subsidy is increased, there is less funding available to subsidise other public transport modes. Their ticket prices go up, driving patrons from public to private transport modes. If rail subsidies do not go up, but the 'soft budget constraint' kicks in, low quality forces rail patrons to use other transport methods – either private or other public transport – that do not meet the objectives, and potentially requiring further subsidies to meet increased demand. If the 'soft budget constraint'

tightens, then rail ticket prices must increase, accelerating the departure of patrons from electric trains to fossil-fuel powered alternatives.

Thus the trains will continue to run late, even though the Regional Council imposes substantial penalties on the rail operator, because the institutional arrangements of central government ownership and regional government subsidy conspire against the operation of normal commercial incentives embedded in the penalty clauses. No individual has any incentive to break the cycle.

It is interesting to compare the arrangements in Wellington with those in Auckland. Train services there are operated by private firm Veolia. Veolia shareholders bear the costs of penalties imposed on the bottom line, so presumably would have stronger incentives to pass on the risks to directors, managers, staff, subcontractors and suppliers (including KiwiRail/ONTRACK from whom track access is acquired) than is the case for KiwiRail in Wellington. Delays for controllable reasons should therefore be less likely in Auckland than Wellington. However, the same subsidy and 'soft budget constraint' limitations also impede the ability to reduce delays in Auckland. If Veolia trains are delayed as a consequence of KiwiRail-controlled actions (signal failures, track work etc), even thought the costs are passed on, the 'soft budget constraint' means that the penalty will have less effect on KiwiRail's effort to reduce delays than if the track owner was a private firm. Furthermore, as a consequence of subsidies for Auckland train services, Veolia managers may also be tempted to engage in the 'subsidise and tax' game. This is more likely to occur if the penalty is weak (i.e. not likely to financially cripple the firm) and the likelihood of getting an increased share of the subsidy is high (i.e. the regional council puts a high priority on moving patronage to trains so is predisposed to increase the subsidy upon evidence of higher costs per passenger-kilometre). If the likely gains from subsidy-gaming are larger than the costs of imposing penalties on managers and staff, then gaming will be preferred, incentives will be foregone, and trains will still run late more often than is optimal.

In conclusion, therefore, it would appear that whilst penalty clauses and passenger compensation would on first blush offer a potential solution to rail passengers facing delays in New Zealand, and a means of increasing public transport patronage as has occurred in Britain, their use is severely constrained by the extent of central and local government intervention in sector ownership and subsidy. Unlike New Zealand, Britain's rail operators are private firms and the track owner is a not-for-dividend company required to meet its own operating costs without recourse to taxpayer guarantees of its losses. If a similar set of incentive-compatible penalty

provisions are to be successful in inducing all of timely commuter train operation, shift of commuter transport mode and ongoing incentives to invest in maintaining both rolling stock and tracks, then the issues of ownership and subsidy must be revisited. If they are not, then Fran Wilde and her constituents might have to get used to being "fed up with the trains" and the delays witnessed of late.